Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Digital Output Protection Technology	)	**MB Docket No. 04-65**
and Recording Method Certifications	)	
	)	
Helix DRM Trusted Recorder	)	

OPPOSITION TO THE APPLICATION OF REALNETWORKS INC. FOR INTERIM AUTHORIZATION OF HELIX DRM TRUSTED RECORDER AND HELIX DEVICE DRM BY THE MOTION PICTURE ASSOCIATION OF AMERICA, INC., METRO-GOLDWYN-MAYER STUDIOS INC., PARAMOUNT PICTURES CORPORATION, SONY PICTURES ENTERTAINMENT INC., TWENTIETH CENTURY FOX FILM CORPORATION, UNIVERSAL CITY STUDIOS LLLP, THE WALT DISNEY COMPANY, AND WARNER BROS. ENTERTAINMENT INC.

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The Motion Picture Association of America, Inc., Metro-Goldwyn-Mayer Studios Inc., Paramount Pictures Corporation, Sony Pictures Entertainment Inc., Twentieth Century Fox Film Corporation, Universal City Studios LLLP, The Walt Disney Company, and Warner Bros. Entertainment Inc. (collectively, "the MPAA Parties") hereby file this opposition to the application of RealNetworks, Inc. ("Real") to have Helix DRM Trusted Recorder be approved as an Authorized Recording Method and Helix Device DRM as an Authorized Digital Output Protection Technology (collectively the "Helix system") on an interim basis for Marked and Unscreened Content (the "Application").

While together the technologies of the Helix system could comprise an effective digital rights management regime, and indeed may currently do so for Internet delivery of encrypted movie content using trusted key license servers, the Application does not describe how the DRM technologies could be utilized to protect Marked and Unscreened content from unauthorized

redistribution. Even if the technology as proposed by Real is approved on even an interim basis,[1] the Commission will not achieve the goals it has established for itself in Broadcast Flag Report & Order, and thus it must be rejected on these grounds. Because the MPAA does believe that the proposed DRM technology might in the future be modified to appropriately serve the goals of the Broadcast Flag system, below we briefly discuss the ambiguities or deficiencies in the Application in the interest of working with Real towards eventual authorization for the Helix DRM system.

In brief, Real has provided insufficient information about the Helix DRM system and, in particular, its applicability to the Broadcast Flag system. For example, the Helix DRM system places no meaningful restrictions on the scope of redistribution of broadcast content. The Application provides no form of proximity control, nor does it precisely define a specific maximum number of compliant Helix DRM devices that can receive, copy, and play Helix-protected content originating from a single Covered Demodulator Product. In addition, the Helix license documents were not provided; the link to their website is not an adequate substitute. The documents found there appear to be inapplicable to the contemplated purposes and in any event contain inadequate or missing compliance and robustness rules. The Application does not describe security mechanisms, such as the effective invocation of revocation and renewability, nor does it contain provisions for meaningful participation by content owners (either as described in the Application or set forth in the licenses referenced). Finally, the Application does not provide sufficient detail or assurances about the intellectual property comprising the system.

[1] The Commission should take no comfort from the fact that technologies are only being considered in this proceeding for authorization on an interim basis. Before the final criteria are adopted, technologies authorized by the Commission today will be incorporated into devices, thus creating a legacy of such products in the hands of consumers, and making withdrawal of interim authorization difficult. The Commission must therefore exercise the utmost care to ensure that no technologies are inappropriately authorized, for mistakes will be very difficult to remedy.

Simply put, the Application describes a generic digital rights management system, which at this point has not been modified, and the Application does not describe how it would modified,[2] to address the Broadcast Flag system, and for this reason must be rejected at this time.

We note at the outset that this proceeding, and the Commission's review of the content protection technologies, related functionalities, and licenses submitted in this proceeding, are concerned only with whether the proposal meets the interim requirements the Commission identified for the protection of digital broadcast television content. This response, therefore, is based on the understanding that if the Commission decides to authorize Helix DRM on an interim basis for use in protecting Marked and Unscreened Content, which the MPAA opposes for the reasons set forth herein, that authorization extends only to the use of Helix DRM in the Broadcast Flag application.[3]

Below we set forth initial concerns about the Application and we hope to work with Real as the technology evolves towards suitability for the Broadcast Flag system.

I. The Helix Application Does Not Address How It Proposes to Impose Reasonable and Affirmative Constraints on Redistribution of Content

The Helix Application does not address the issue of the scope of redistribution of broadcast content, and assumes that a generic rights management system is appropriate for the Broadcast Flag. The Application does not actually describe how the system is applicable or effective for the goals of the Broadcast Flag system. Although the documentation provides very little details, extrapolating from the statement asserted about the end-to-end DRM system that

[2] This is evident in the Application, which address the value of Helix's copy control states at length (See, e.g., Sections 2.3 and 3.2 of the Application). The Broadcast Flag system, however, does not assert numeric copy control but merely signals redistribution control.

[3] For example, the interim authorization of a content protection technology would not determine in any way whether that technology appropriately protects content with copy restrictions delivered through high-definition analog outputs, which was not the subject of the Broadcast Flag proceeding.

spans PC, Internet, and Broadcast spaces, it is possible that Marked and Unscreened Content could be distributed to an undefined number of Helix-compliant machines. Using the values Real presents in the default table of Supported Rights, there is nothing to restrict Marked Content recordings from being distributed an infinite number of times to an undefined number of Helix-compliant players anywhere in the world, and thus the system does not control Marked Content or its redistribution at all. For example, if a Helix DRM Trusted Recorder makes an encrypted copy of Marked Content, this User Licensed content can be distributed over the Internet to an undefined number of Helix Device DRM-equipped players that have requested and been given the User Key. Clearly, the Commission's goal of preventing "widespread indiscriminate retransmission" cannot be achieved in such a manner. On this ground alone, Helix cannot be accepted in its current form.

Technologies considered for interim authorization must contain, as a necessary condition, proximity controls that approximate the physical constraints that have heretofore prevented consumers from being retransmitters. Limiting the "proximity" means that the technology affirmatively and reasonably constrains unauthorized redistribution from extending beyond a Covered Demodulator Product's local environment – i.e., the set of compliant, authorized devices within a tightly defined physical space around that product. Affirmative and reasonable constraints may include the use of controls to limit distance from a Covered Demodulator Product, or limits on the scope of the network addressable by such Covered Demodulator Products. Personal affinity-based controls that approximate association of such set of devices with an individual or household may be beneficial to use in addition to such proximity constraints, but are not a substitute for them at this time.

In the context of this interim process, technologies that rely on personal affinity-based mechanisms alone raise too many difficult technological, policy, privacy, and legal questions that are not appropriately addressed in this proceeding. The use of personal affinity-based controls, without proximity controls, would essentially allow consumers to be retransmitters of content owned by others, a far-reaching situation never before faced by the Commission, and new as well to content providers, broadcasters, manufacturers, and others, including even consumers themselves. Physical redistribution, which has been in existence for years, is well understood; however, there are difficult questions concerning what technological limits need to be placed on consumer retransmission such that content owners' rights are not trampled and the digital transition thwarted. These are not the sort of issues that are appropriately addressed in an accelerated, interim proceeding.

In exchanges during the proceeding which led to this interim certification procedure, reference was occasionally made to the notion of "remote access" – that is, to circumstances under which the technology need not inhibit, and indeed might facilitate, transmission to locations remote from the home receiver. The MPAA Parties are <u>not</u> opposed to that notion as such; however, we strongly believe that careful consideration of numerous interrelated practical, business, legal, and technological considerations which underlie the appropriate "circumstances" is a fundamental necessity and complex undertaking – including a threshold issue of whether it is better suited to government involvement or marketplace resolution.[4] Converting the consumer to

[4] The remote access issue is precisely presented under the heading of "personal digital network environment" (to the extent it extends beyond the home, the PDNE is essentially a remote-access zone) in the Commission's Further Notice of Proposed Rulemaking in the Docket No. 02-230, FCC 03-273 (rel. Nov. 4, 2003). *The conclusion of that inquiry should not be predetermined in this relatively summary and fast track proceeding. Moreover, comments in that docket generally agreed that it was premature, at best, to address this issue. See, e.g.,* Comments of MPAA *et al*. at 8 ("[A]n attempt to regulate or define this area will inevitably risk substantial and continuing conflict with copyright law definitions of exclusive rights pertaining o performance and distribution, and significantly impair if not render impossible the efforts of copyright owners to protect those right by technological means. *It will also fundamentally impair and interfere with emerging business models designed to enhance consumer choice and*

a re-broadcaster is a far-reaching step; for that reason we believe it is premature, inappropriate, and counterproductive to approve in this interim proceeding this or any other technology which, on the present record at least and unless modified or sufficiently clarified, does not take meaningful and affirmative steps to limit redistribution by proximity to the home receiver.

Furthermore, personal affinity-based controls alone, without a proximity component, are not able at this time to ensure the protection of broadcast content. Even if the personal affinity-based controls are combined with numeric limits on the number of devices that can copy and consume the content, these measures without proximity controls would not be effective. Such a system would still allow unauthorized redistribution to a few devices outside the local broadcast market per receiver. While redistribution to two or three persons out-of-market may not hurt local broadcasting, that effect would be multiplied by the number persons receiving the initial broadcast. In addition, unconstrained redistribution to two or three persons per initial recipient would have a cascade effect, given that the program could then be further redistributed to two or three more persons, *ad infinitum*. Proximity controls help to ensure that the locally broadcast content is not undermined by this variation of the distant signals problem.

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consumer enjoyment of remote usage technologies.") (emphasis added); Comments of Time Warner Inc. at 10-12 (noting and illustrating, *inter alia*, "substantial effect and alter[ation] of existing video distribution agreements and business models"; "implica[tion] of significant and controversial copyright law issues" ; provoking "protracted legal conflicts and consumer confusion"; existing cross-industry efforts to "accommodate consumer interests to use content flexibly" ; enmeshing and undermining pre-existing business and licensing relationships including geographic limitations that "are particularly important in the broadcast television context, since many broadcast programs are licensed to television stations pursuant to strict and well-defined local market restrictions"); Comments of the Office of the Commissioner of Baseball *et al*. at 6-7 (concern that remote access regimes "must be consistent with copyright owners rights" and "go no further than copyright law permits"). Although differing with the MPAA parties on rationale (and hence reinforcing the Time Warner prediction of "protracted legal conflict") the Comments of Public Knowledge and Consumers Union (at 11-12) explicitly acknowledged that defining a PDNE "will tread on the prerogatives of Congress in defining copyright law and associated doctrines such as fair use." Other commenting parties rejected the need for a government defined PDNE or zone of remote access on grounds that differ from the MPAA parties but, like those of Public Knowledge and Consumers Union, amply forecast the contentious and difficult nature of the exercise, which far transcends the limited scope and purpose of the instant proceeding. *See, e.g.*, Comments of the IT Coalition at 6-8; Comments of Digital Transmission Licensing Administrator LLC at 16-17.

The Application is also confusing in its description of how "[t]he Content Provider assigns a unique User Key to each Licensed User" and "[i]f the User wishes to use their content . . . they need to . . . register the new PC with the Content Provider, thus obtaining a License with the User Key." From this description, Real seems to imply that content providers and broadcasters must operate license key servers to enable the Helix DRM system. If this is a necessary component of the Helix DRM system, it needs to be clarified.

In any event, Real has not at this time proposed personal affinity-based mechanisms or numeric device limits for use with the Helix DRM system. If Real re-submits its Application, the MPAA Parties believe that effective proximity controls should be added. The MPAA Parties look forward to working with Real to improve its submission in this regard.

II. The Application Fails to Provide Sufficient Information on Licensing Concerns

The Application is unclear as to what licensing terms will be applicable for the technologies if authorized as part of the Broadcast Flag system. The hyperlink provided for all Helix terms links to a series of the "standard" open source agreements for Helix technologies, but it is not clear whether they contain the terms for the Helix system for the Broadcast Flag, and if so, how they relate to the use of the technologies as contemplated for the Broadcast Flag system. If, in the future, licensing terms do reflect the use of the technologies for the purposes contemplated in this proceeding, for example, by identifying appropriate legal terms such as compliance and robustness requirements for Covered Demodulator Products as well as any downstream outputs contemplate, as well as a reliable commitment from the Real to enforce them in conjunction with affected parties, such as content owners, the MPAA would welcome the opportunity to review them.

Even aside from the fact that the licensing terms have not incorporated the brief concepts reflected in the Application that at minimum will be appropriate for the Broadcast Flag system, the description of the controls that might be in place in the future in such terms is too vague and incomplete to support an evaluation at this time. For example, the compliance rules identified by the Real Application simply state that digital audio content shall not be output in an unprotected digital form and digital output is allowed using approved output mechanism. These statements reflect an appropriate recognition of the need for control of content as it moves through multiple systems, yet provide no details for a reviewer to evaluate the usefulness or effectiveness of the technology as part of that system. In addition, Sections 3.3.3 and 3.5.11 identify a series of robustness requirements for implementations, but it is unclear how such requirements are enforced or communicated as obligations. As an example, the compliance and robustness rules submitted by other technologies that have been effectively used for some time in the marketplace for protection of content – for example DTCP and HDCP – reflect a far more complex understanding of the relationships involved in the transfer and protection of content.

III. The Application Fails to Identify Important Security Mechanisms and Effective Invocation of Revocation and Renewability

Secure device revocation is a necessary component of any content protection technology. Similarly, a technology that is proposed for interim authorization also needs to have "renewability," meaning the ability to be upgraded to repair or compensate for security flaws. While the Application references possibilities for revocation in Section 3.3.5 and states that content owners can revoke compromised content in the event of a security Player breach, it does not provide details for evaluating this mechanism. And while Section 3.3 of the Application addresses renewability, it does not provide sufficient details to assess the adequacy of the mechanism referenced.

Simply put, the Application does not provide sufficient information to evaluate the relative security of the system – neglecting to provide adequate information on concepts essential to a secure system, such as revocation, renewal, and robustness of implementations. Because we have objected to this technology as not sufficiently related to or appropriate for the Broadcast Flag system at this time, it is not necessary to list out all security concerns with the system in this objection, but we remain willing to discuss our concerns further with Real.

Additionally, in order to effectuate revocation, renewal, or other aspects of a proposed technology that require information to accomplish a process or continued robustness or efficiency of the technology over time, it is necessary that a standardized means for delivering this information in the ATSC transport stream is developed and that FCC approval of any protected digital output and secure recording technology include obligations that Covered Demodulator Products and downstream devices properly receive, preserve, process, and convey downstream, as appropriate, such information. In any subsequent filing, Real should explain how it will deal with this issue.

IV. Real Must Provide for Effective Participation of Content Owners in Change Management and Enforcement

The Application has no provision for "Change Management," that is, a procedure under which content owners have a meaningful opportunity to object to changes in the license. This is an important omission, for if nothing prevents a technology manufacturer from changing the technology in material and unforeseen ways, the entire Broadcast Flag system that the Commission has worked so hard to create may come undone. Owing to the critical nature of these matters, the omission of a meaningful role for content owners or broadcasters in the Change Management process should preclude approval of Helix in its current form

In addition, as noted above, a critical component of any content protection technology is the ability of content owners to enforce robustness and compliance requirements against manufacturers. In private agreements, this allows content owners, who have more of an interest in enforcement of the compliance and robustness rules than technology vendors, to enforce those provisions without relying on the technology manufacturer to do so. That reasoning is no less applicable in the Broadcast Flag context. The success of the Broadcast Flag regulation depends not only on the regulation itself, but also on the license terms that replicate the regulation's compliance and robustness requirements downstream. The Commission has no direct enforcement power over downstream devices, and there may be no provision or resources to pursue technology manufacturers for failure to enforce their licenses. It is thus equally important in this context, therefore, that content providers have third-party beneficiary rights allowing pursuit of device manufacturers that breach the terms of the content protection technology license. The Application, however, lacks any content participant agreement at all, and does not provide content owners with third-party beneficiary rights under the license. Given the lack of Commission authority to directly enforce those license terms, this is a critical oversight, and Helix should not be authorized as an interim technology until this is remedied.

V. There Has Been No Content Owner Use or Approval of Helix DRM

Although Real has asserted that approval of Helix DRM by content owners to entities involved in Internet delivery services is pertinent to this proceeding, Internet delivery is a very different environment. First, with respect to commercial delivery services, such as MovieLink, content providers have entered into license agreements requiring the use of specified protection technologies for secure delivery of their content with legally binding compliance and robustness rules. No such contractual relationship exists between the content provider and the technology

provider when free over-the-air television containing a broadcast flag is delivered to a consumer device. The Commission's decision with respect to Helix DRM should not be influenced by prior approval of a different implementation of the technology in the context of a negotiated private license.

Second, the implementation of Helix DRM in Movielink is not comparable to Helix DRM as proposed for broadcast television. In the case of Movielink, content owners rely on Movielink's secure application software to manage the distribution of encrypted content and the distribution of the Helix DRM license keys for decrypting downloaded Movielink content, which can only be played one time on a single registered PC by paying customers. In the case of Broadcast Flag content, however, the license key is generated locally in software, and the content is encrypted locally by the consumer's PC. The content can then be distributed over the Internet to an undefined number of Helix DRM-equipped PCs for unlimited playback. As such, the risk of attack and the scope of redistribution are much greater in the latter case.

VI. If Real Resubmits Its Helix DRM Application, It Should Facilitate Ready Discussion by Clarifying That It Is Bound to Helix DRM's License and That Helix DRM Imposes No Obligations on Content Providers, Broadcasters, and Others

The MPAA Parties request that Real, as part of any resubmission of Helix DRM, also respond to and/or clarify the following issues in a satisfactory manner in order to facilitate ready consideration of Helix DRM technology by the Commission in this proceeding.

First, Real should clarify that it will abide by the Helix DRM compliance and robustness rules when it incorporates Helix DRM into its own products. The critical issue is that no manufacturer of a downstream device receiving Marked or Unscreened Content should be able to do so without agreeing to follow compliance and robustness rules equivalent to those in the Broadcast Flag regulation. Real should therefore clarify that for any use of the Helix DRM

technology, Real itself is obligated to comply with the compliance and robustness rules of the Helix DRM license agreement in the same manner as any other Adopter licensee of the Helix DRM technology.

Second, Real should clarify that there are no obligations that would impact content owners, broadcasters, consumers, or others described below by use of its technology. Helix DRM could become one of many technologies included in the Broadcast Flag system. All approved technologies will receive broadcast content marked with the Broadcast Flag and may be invoked or "triggered" in response to the Broadcast Flag in various devices, such as set-top boxes and digital video recorders. Content providers, broadcasters, and others currently cannot direct which approved technologies may receive broadcast content marked with the Broadcast Flag or which approved technologies may get triggered by the Broadcast Flag. Because content providers, broadcasters, and others exercise no direct control over the actual use of Helix DRM (or any of the other potential approved technologies), Real should clarify that broadcasters, content providers, and others who do not take a license to the Helix DRM technology but who mark or broadcast content with a Broadcast Flag that triggers Helix DRM are not subject to any obligations to Real, including but not limited to intellectual property licensing obligations. Furthermore, Real should certify, as a condition of interim authorization, that no consumer transmitting or receiving content marked with the Broadcast Flag signal will incur any claim of obligation from Real.

CONCLUSION

We look forward to working with Real toward the goal of the Commission's ultimate authorization of Helix on an interim basis for use in protecting digital broadcast content under the Broadcast Flag regulation.

Respectfully submitted,

THE MOTION PICTURE ASSOCIATION OF AMERICA, INC.
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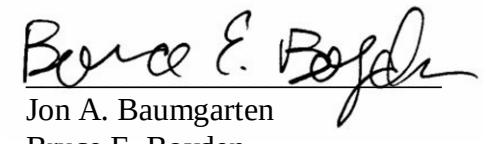
By: 

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